

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s):	William F. Sauber		
Assignee:	Dell Products L.P.		
Title:	Method and System for PCI Express Audiovisual Output		
Serial No.:	10/621,069	Filed:	July 16, 2003
Examiner:	Alan S. Chen	Group Art Unit:	2182
Docket No.:	DC-05242	Customer No.:	33438

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Austin, Texas  
November 26, 2007

Mail Stop Appeal Brief - Patents  
Board of Patent Appeals and Interferences  
United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPEAL BRIEF UNDER 37 CFR § 41.37**

Dear Sir:

Applicant submits this Appeal Brief pursuant to the Notice of Appeal filed in this case on October 1, 2007. The fee for this Appeal Brief is being paid electronically via the USPTO EFS. The Board is also authorized to deduct any other amounts required for this appeal brief and to credit any amounts overpaid to Deposit Account. No. 502264.

**I. REAL PARTY IN INTEREST - 37 CFR § 41.37(c)(1)(i)**

The real party in interest is the assignee, Dell Products L.P. as named in the caption above and as evidenced by the assignment set forth at Reel 014304, Frame 0917.

**II. RELATED APPEALS AND INTERFERENCES - 37 CFR § 41.37(c)(1)(ii)**

Based on information and belief, there are no appeals or interferences that could directly affect or be directly affected by or have a bearing on the decision by the Board of Patent Appeals and Interferences in the pending appeal.

### **III. STATUS OF CLAIMS - 37 CFR § 41.37(c)(1)(iii)**

Claims 1-21 are pending in the application. Claims 1-21 stand rejected. The rejection of Claims 1, 3, 5, 6, 8, 9, 11, 13, 14, 16, 17, 19, 20 and 21 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2005/0144468 issued to Northcutt et al is appealed. The rejection of claims 2, 10 and 18 under 35 U.S.C. § 103(a) as being unpatentable over Northcutt in view of U.S. Patent Publication No. 2006/0259642 issued to Du et al. is appealed. The rejection of claims 4, 7, 12 and 15 under 35 U.S.C. § 103(a) as being unpatentable over Northcutt is appealed. Appendix "A" contains the full set of pending claims.

### **IV. STATUS OF AMENDMENTS - 37 CFR § 41.37(c)(1)(iv)**

No amendments after final have been requested or entered.

### **V. SUMMARY OF CLAIMED SUBJECT MATTER - 37 CFR § 41.37(c)(1)(v)**

Information handling systems typically use separate links to communicate video and audio information from a memory hub to graphics and audio devices that present the information as images and sounds (page 2, lines 19-31). To provide collocation of video and audio information for use at an audiovisual appliance, Claim 1 recites an information handling system (Figure 1, element 10) graphics card (Figure 1, element 12) having a graphics controller (Figure 1, element 28) to process visual information, audio processing components (Figure 1, element 30) to process audio information and a PCI express switch (Figure 1, element 26) disposed between a PCI Express interface, the graphics controller and the audio processing components, the PCI Express switch operable to switch visual information to the graphics controller and audio information to the audio processing components (page 5, line 8 – page 6, line 13). Claim 9 recites a method of communicating generated audiovisual information to a PCI Express graphics card comprising switching audio information to audio processing components and video information to video processing components (page 5, lines 17-22) and processing the audio and visual information to output an audiovisual appliance signal (page 5, lines 26-28). Claim 17 recites a PCI Express graphics card (Figure 1, element 12) comprising a PCI Express switch (Figure 1, element 26) operable to switch audio information to audio

processing components (Figure 1, element 30) and video information to video processing components (Figure 1, element 28) for processing to output an audiovisual appliance signal (Figure 1, element 36; page 5, line 8 – page 6, line 13).

**VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL - 37 CFR § 41.37(c)(1)(vi)**

Claims 1, 3, 5, 6, 8, 9, 11, 13, 14, 16, 17, 19, 20 and 21 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Publication No. 2005/0144468 issued to Northcutt et al. Claims 2, 10 and 18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Northcutt in view of U.S. Patent Publication No. 2006/0259642 issued to Du et al. Claims 4, 7, 12 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Northcutt.

**VII. ARGUMENT - 37 CFR § 41.37(c)(1)(vii)**

Northcutt cannot anticipate or make obvious Claims 1, 9 or 17 because Northcutt fails to teach, disclose or suggest all elements recited by Claims 1, 9 and 17. The switch 71 of Northcutt relied upon by the Examiner is on the wrong side of the audio and visual processing components and therefore cannot anticipate Claims 1, 9 and 17. Accordingly, Applicant respectfully requests that the Board reverse the rejections of Claims 1, 9 and 17.

**A. Claim 1**

Northcutt discloses an information handling system in Figure 5 that provides audio and visual information from a graphics card 16 to a media card 20 that is depicted in greater detail by Figure 10. Visual information is provided to media card 20 through a PCI Express bus while audio information is provided from a separate source so that a switch 71 combines visual and audio information for output through an HDMI interface 52.

Claim 1 recites, in part, “a PCI Express switch coupled to the graphics card, the PCI Express switch disposed between the PCI Express interface, the graphics controller and the audio processing components, and operable to switch visual information from the PCI Express interface to the graphics controller and audio information from the PCI Express interface to the audio processing components.”

Northcutt cannot anticipate Claim 1 because Northcutt fails to teach, disclose or suggest all elements recited by Claim 1. For example, Northcutt fails to teach, disclose or suggest “a PCI Express switch coupled to the graphics card, the PCI Express switch disposed between the PCI Express interface, the graphics controller and the audio processing components, and operable to switch visual information from the PCI Express interface to the graphics controller and audio information from the PCI Express interface to the audio processing components.” Nothing in Northcutt indicates at all that switch 71 is a PCI Express switch as recited by Claim 1. To the contrary, the switch 71 of Northcutt accepts output from a graphics accelerator and audio Codec, indicating that the format is not PCI Express. However, even if switch 71 is a PCI Express switch, switch 71 accepts audio and visual information from separate inputs and combines the inputs for use at an HDMI interface. In contrast, the switch recited by Claim 1 accepts audiovisual information at an interface and separates visual information for use by a graphics controller and audio information for use by audio processing components. Accordingly, Northcutt cannot anticipate Claim 1 and Applicant respectfully requests that the Board reverse the Examiner’s rejection.

#### B. Claim 9

Claim 9 recites, in part, “switching the audiovisual information with a PCI Express switch so that the audio information is communicated to audio processing components and the video information is communicated to video processing components.”

Northcutt cannot anticipate Claim 9 because Northcutt fails to teach, disclose or suggest all elements recited by Claim 9. For example, Northcutt fails to teach, disclose or

suggest “switching the audiovisual information with a PCI Express switch so that the audio information is communicated to audio processing components and the video information is communicated to video processing components.” The switch referenced by the Examiner combines separate audio and visual information for use at an HDMI interface while Claim 9 recites that audiovisual information is switched so that audio information is communicated to audio processing components and video information is communicated to video processing components. Accordingly, Northcutt cannot anticipate Claim 9 and Applicant respectfully requests that the Board reverse the Examiner’s rejection.

#### C. Claim 17

Claim 17 recites, in part, “a PCI Express switch in communication with the PCI Express interface and operable to switch audio information to audio processing components and video information to video processing components.”

Northcutt cannot anticipate Claim 17 because Northcutt fails to teach, disclose or suggest all elements recited by Claim 17. For example, Northcutt fails to teach, disclose or suggest “a PCI Express switch in communication with the PCI Express interface and operable to switch audio information to audio processing components and video information to video processing components.” The switch referenced by the Examiner combines separate audio and visual information for use at an HDMI interface while Claim 17 recites that audiovisual information is switched so that audio information is communicated to audio processing components and video information is communicated to video processing components. Accordingly, Northcutt cannot anticipate Claim 17 and Applicant respectfully requests that the Board reverse the Examiner’s rejection

#### **VIII. CLAIMS APPENDIX - 37 CFR § 41.37(c)(1)(viii)**

A copy of the pending claims involved in the appeal is attached as Appendix A.

#### **IX. EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)**

None

**X. RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(x)**

There are no related proceedings.

**XI. CONCLUSION**

For the reasons set forth above, Applicant respectfully submits that the rejection of pending Claims 1-21 is unfounded, and requests that the rejection of claims 1-21 be reversed.

I hereby certify that this correspondence is being electronically submitted to the COMMISSIONER FOR PATENTS via EFS on November 26, 2007.

*/Robert W. Holland/*

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Respectfully submitted,

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**CLAIMS APPENDIX "A" - 37 CFR § 41.37(c)(1)(viii)**

1. An information handling system comprising:  
information processing components configured to output audio and visual information to a PCI Express interface;  
a graphics card having a PCI Express interface in communication with the audio and visual information output by the information processing components and an audiovisual appliance interface operable to output audiovisual information to an audiovisual appliance;  
a graphics controller coupled to the graphics card and operable to process visual information of the information processing components for output to the audiovisual appliance interface;  
audio processing components coupled to the graphics card and operable to process audio information of the information processing components for output to the audiovisual appliance interface;  
a PCI Express switch coupled to the graphics card, the PCI Express switch disposed between the PCI Express interface, the graphics controller and the audio processing components, and operable to switch visual information from the PCI Express interface to the graphics controller and audio information from the PCI Express interface to the audio processing components.
2. The information handling system of Claim 1 wherein the audio processing components comprise:  
an AC97 interface operable to accept the audio information from the PCI Express switch for output to a CODEC; and  
a CODEC operable to accept the audio information from the AC97 interface and to output the audio information to the audiovisual appliance interface.
3. The information handling system of Claim 1 wherein the audio processing components comprise an audio controller operable to accept the audio information from the PCI Express switch and to output the audio information to the audiovisual appliance interface.

4. The information handling system of Claim 1 wherein the audiovisual appliance interface comprises a coaxial cable output.

5. The information handling system of Claim 1 wherein the audiovisual appliance interface comprises a HDMI output.

6. The information handling system of Claim 1 wherein the audiovisual appliance interface comprises a HDTV output.

7. The information handling system of Claim 1 wherein the audiovisual appliance interface comprises an EVC output.

8. The information handling system of Claim 1 wherein the audiovisual appliance interface comprises a 1394 output.

9. A method for processing audio information through a PCI Express graphics card, the method comprising:

generating audiovisual information at an information processing system;  
communicating the audiovisual information to a PCI Express interface of the PCI Express graphics card;  
switching the audiovisual information with a PCI Express switch so that the audio information is communicated to audio processing components and the video information is communicated to video processing components;  
processing the audio and visual information with the audio and video components to output an audiovisual appliance signal.

10. The method of Claim 9 wherein the audio processing components comprise:  
an AC97 interface operable to accept the audio information from the PCI Express switch for output to a CODEC; and  
a CODEC operable to accept the audio information from the AC97 interface and to output the audio information to the audiovisual appliance interface.



11. The method of Claim 9 wherein the audio processing components comprise an audio controller operable to accept the audio information from the PCI Express switch and to output the audio information to the audiovisual appliance interface.

12. The method of Claim 9 wherein the audiovisual appliance signal comprises a coaxial cable signal.

13. The method of Claim 9 wherein the audiovisual appliance signal comprises a HDMI signal.

14. The method of Claim 9 wherein the audiovisual appliance signal comprises a HDTV signal.

15. The method of Claim 9 wherein the audiovisual appliance signal comprises an EVC signal.

16. The method of Claim 9 wherein the audiovisual appliance signal comprises a 1394 signal.

17. A PCI Express graphics card comprising:  
a PCI Express interface operable to accept audio and visual information communicated in PCI Express format;  
a PCI Express switch in communication with the PCI Express interface and operable to switch audio information to audio processing components and video information to video processing components;  
audio processing components in communication with the PCI Express switch and operable to process the audio information to output an audiovisual appliance signal;  
video processing components in communication with the PCI Express switch and operable to process the video information to output an audiovisual appliance signal; and

an audiovisual interface in communication with the audio processing components and the video processing components and operable to communicate the audiovisual appliance signal to an audiovisual appliance.

18. The PCI Express graphics card of Claim 17 wherein the audio processing components comprise:
  - an AC97 interface operable to accept the audio information from the PCI Express switch for output to a CODEC; and
  - a CODEC operable to accept the audio information from the AC97 interface and to output the audio information to the audiovisual interface.
19. The PCI Express graphics card of Claim 17 wherein the audio processing components comprise an audio controller operable to accept the audio information from the PCI Express switch and to output the audio information to the audiovisual interface.
20. The PCI Express graphics card of Claim 17 wherein the audiovisual interface comprises a single connector having audio and visual information.
21. The PCI Express graphics card of Claim 17 wherein the audiovisual interface comprises an audio connector having audio information and a video connector having visual information.

**EVIDENCE APPENDIX - 37 CFR § 41.37(c)(1)(ix)**

None

**RELATED PROCEEDINGS APPENDIX - 37 CFR § 41.37(c)(1)(v)**

There are no related proceedings.